



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

AK

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/600,607 | 07/19/2000 | MAARTEN KUIJPER | PHN16.643 | 5334 |

24737 7590 10/28/2003

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

SCHECHTER, ANDREW M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2871

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,607

Applicant(s)

KUIJPER, MAARTEN

Examiner

Andrew Schechter

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 15.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____.

DETAILED ACTION

Prosecution Reopened

1. Prosecution on the merits of this application is reopened on claims 1-5, 7, and 8 considered unpatentable for the reasons indicated below: see below under "Claim Rejections - 35 U.S.C. 103".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ito et al.*, U.S. Patent No. 5,583,679 in view of *Conner et al.*, U.S. Patent No. 5,548,422 and *Scheffer*, U.S. Patent No. 4,239,349.

Ito discloses [see Figs. 6 and 7] a modulation system comprising at least one liquid crystalline image display panel [see Fig. 6] having a first and second polarizer [63a, 63b] between which a layer [61] of TN (twisted nematic) liquid crystalline material [see col. 21, line 55, for instance] is enclosed, characterized in that a single birefringence-compensating element [62, and see col. 21, lines 45-61] is located between the layer of TN (twisted nematic) liquid crystalline material and one of the two polarizers [see Fig. 6], which element has a tilted optical director profile [see abstract

and Fig. 4, for instance] whose projection [62M] in the plane of the polarizers encloses an angle ϕ [either the angle α in Fig. 7 or an analogous angle between 62M and either 61Ra or 61Rb] different from 0 [the angle α is between 90° and 270° , and 62M is preferably along the “minus direction of x axis”, col. 21, lines 35-61] with the active rubbing direction [either 61Ra or 61Rb] of the layer.

Ito does not disclose the further limitations of claim 1 that this modulation system is for an image projection system comprising an illumination system for supplying an illumination beam, where the modulation system modulates the illumination beam in conformity with image information to be projected, and where there is an optical system for projecting an image. In short, *Ito* does not disclose the use of the panel as part of an image projection system with an illumination system and an optical system (either an ordinary projector or a head-mounted one); the examiner takes official notice that this use of liquid crystal panels is well-known and conventional, and would be obvious to one of ordinary skill in the art motivated by, among other reasons, having additional commercial applications for the panel and being able to display the image to a larger audience. Claim 1 is therefore unpatentable.

(An analogous statement was made regarding the *Xu* and *Kawata* references in the Office Actions of 5 July 2002 and 6 February 2003 without being contested by the applicant. As evidence supporting the statement, the examiner cites *Conner* which teaches that “color LCD displays are sometimes employed in cooperation with overhead projectors to project a computer generated color image onto a projection screen for viewing by a large audience” [col. 1, lines 23-26] and *Scheffer* which discloses [see Fig.

Art Unit: 2871

6] a generic example of such an image projection system, having an illumination system [1] for supplying an illumination beam and an optical system [29] for projecting an image. It would have been obvious to one of ordinary skill in the art to use the LCD of *Ito* in a projection system such as that of *Scheffer*, motivated by the desire to display the image to a large audience, as discussed above.)

Considering *Ito*, the birefringence compensating element has negative birefringence [see abstract] and is a negative birefringent foil (thin sheet) having a tilted optical director profile, so claims 2 and 5 are also unpatentable.

Ito discloses that the angle α is between 90° and 270° , as noted above; when it is between 255° and 270° , the angle ϕ is such that $0^\circ < \phi \leq 15^\circ$ (taking 61Rb as the active rubbing direction). In cases where ranges overlap, a *prima facie* case of obviousness exists [see MPEP 2144.05], so claim 3 is also unpatentable.

It has been assumed by the examiner [see the Office Action of 5 July 2002, p. 5] that either rubbing direction can be taken as the active rubbing direction, so 61Ra can represent the active rubbing direction on the side with the element, so claim 4 is also unpatentable.

As discussed above, using either an ordinary projector or a head-mounted one (with head-supporting means) would be obvious to one of ordinary skill in the art, motivated by the desire to have additional commercial applications for the panel and/or being able to display the image to a larger audience, so claims 7 and 8 are also unpatentable.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Andrew Schechter
17 October 2003


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000